

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WISCONSIN**

UNITED STATES OF AMERICA

vs.

SINOVEL WIND GROUP CO., LTD., *et al.*,

Defendants.

Case No. 13-cr-84-jdp

FILED UNDER SEAL¹

**SPECIALLY-APPEARING DEFENDANT SINOVEL WIND GROUP CO., LTD.’S
SUPPLEMENTAL EXPERT DISCLOSURE PURSUANT TO RULE 16**

Specially-appearing defendant Sinovel Wind Group Co., Ltd., (“Sinovel”) respectfully submits its Expert Disclosure Pursuant to Federal Rule of Criminal Procedure 16(b)(1)(C) and this Court’s Order dated November 8, 2017.²

1. Michael R. Bandemer, CPA, EnCE, CFF, CMA, CITP

Michael Bandemer is a computer forensics and electronic discovery expert with Berkeley Research Group, LLC (“BRG”). Mr. Bandemer is a managing director at BRG and the national practice leader for the firm’s Discovery and Forensic Technology Services group, which provides, among other things, consulting and expert services in the area of computer forensics, electronic discovery, and other associated technology advisory

¹ This disclosure is being filed under seal pursuant to Administrative Order No. 311 and the protective order previously entered by the Court in this matter. See Admin. Order No. 311 (W.D. Wis. 2013) (General Rules for Filing Documents Under Seal) (ordering, in relevant part, that “documents may be filed under seal if, and only if, done pursuant to a protective order[.]”); Dkt. 107 (Stipulated Protective Order).

² Sinovel reserves all rights to have the experts disclosed herein offer rebuttal testimony to any putative expert opinions offered at trial by government witnesses.

services to corporations, law firms, and governments in the United States and abroad. Mr. Bandemer's qualifications are further set forth in the resume attached as Exhibit 1.

The defense expects that Mr. Bandemer will offer scientific, technical, or opinion testimony regarding the forensic evidence in this case. Mr. Bandemer will testify about the government's failures to engage in appropriate preservation of key forensic evidence in this case, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Additionally, he will testify that the methods, preservation, and handling of forensic evidence in this investigation by non-government investigators or entities compromised the integrity of the forensic data. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

Mr. Bandemer will also opine that there are defects in the chain of custody and problems with the preservation of certain pieces of forensic evidence in this case that render the conclusions drawn from that evidence unreliable. Mr. Bandemer will opine that various individuals did not follow industry standards for the collection of certain forensic evidence and that, as a result, the forensic evidence has been corrupted. The absence of coherent chain of custody and other documentation means that he is unable to authenticate that the evidence has not been manipulated after Mr. Karabasevic relinquished custody. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Mr. Bandemer's anticipated opinions are based on the forensic evidence collected by the government and non-government investigators and provided in discovery by the government in this case at the FBI offices in St. Francis, Wisconsin, as well as the results of Mr. Bandemer's forensic examination of the images produced by the government in this matter, including his examination of images produced as QMW11_1, 11_4, 11_9, and 11_10. Mr. Bandemer's anticipated opinions are also based on documentation generated

by government and non-government investigators, such as forensic preservation documentation/logs and chain of custody documentation, including documents such as Bates Nos. 5000-01, 5008-09, 5012-13, and 17227-34; FBI FD-302 reports, including that of Deloitte forensic investigator Michael Meixner (Bates No. 004952-005146); materials produced by AMSC; the Deloitte report prepared for AMSC; Austrian law enforcement documentation; documents/reports/work product prepared by Special Agent Matthew J. Petersen, Michael Fisher, and Uwe Sailer; the government's March 1, 2017, Expert Disclosure (Dkt. 191); government discovery letters (e.g., Dkt. 199 and 233); and the government's May 24, 2017, Supplemental Expert Disclosures (Dkt. 243).

2. Adjunct Prof. Ron Schnell, M.S.

Ron Schnell is an expert on matters related to software development, source code, data and system security and integrity, and intellectual property. Mr. Schnell's qualifications are further set forth in the resume and "Expert Experience" attached as Exhibit 2.

The defense anticipates that Mr. Schnell will testify that the government's means of collecting the evidence from the Sinovel turbines in Massachusetts were not forensically acceptable and did not maintain the integrity of the extracted data. Mr. Schnell is also expected to testify that Special Agent Petersen used improper terms and made inaccurate statements in his reports, which undermine the reliability of his analysis. Additionally, Mr. Schnell will opine that, in various instances, FBI witness Michael Fisher reached conclusions about the comparisons of AMSC compiled code with the material allegedly stolen by Mr. Karabasevic without providing an adequate scientific basis or support. The defense further expects Mr. Schnell to opine about the effectiveness of forensic tools used

to compare data streams, [REDACTED] Mr. Schnell will also testify regarding the nature, limitations, and potential use of any binary files or compiled code identified by the government as having been stolen from AMSC or its affiliates, including the ability to develop, modify, or reverse engineer software solutions from that material. [REDACTED]

[REDACTED]

Mr. Schnell will also testify regarding AMSC's source code and how source code control systems such as subversion work. He will provide scientific or technical testimony regarding source code security and the functionality and operation of source code control systems. He will also provide scientific, technical, or opinion testimony related to the security over the source code at issue in this case, as well as how source code is accessed and tracked from and by source code control systems. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Mr. Schnell's anticipated opinions are based on forensic evidence collected by the government and provided in discovery in this case at the FBI offices in St. Francis, Wisconsin, including, for example, source code, binaries, AMSC's checksum generator, and evidence gathered from the Massachusetts turbines. Mr. Schnell's opinions are also based on documents provided in discovery, including, but not limited to, the following categories of materials: FBI FD-302 reports including those of Hartman (Bates No. 006562-006595), Hribar (Bates No. 006596-006598), Karabasevic (Bates No. 006952-006954), Vareka (Bates No. 014750-014782), Buerosse (Bates No. 015629-32), Groeber (Bates No. 007044-49), Schuetzer (Bates No. 012760-69), Littlefield (Bates No. 16573-16576), Gruenberger (Bates No. 007050-7052), Wayer (Bates No. 015009-15014), and Fischer (Bates No. 005576-5591); a DVD of materials collected by Deloitte and produced by the government to Sinovel in its entirety; materials produced by AMSC; the Deloitte report prepared for AMSC; documents/reports/work product prepared by Special Agent

Petersen, Mr. Fisher, Sandra Schuetzer, and William Vareka; communications involving AMSC employees regarding access to subversion, modifications to the source code, and other technical topics; the indictment in this matter; the government's March 1, 2017, Expert Disclosure (Dkt. 191); documents produced by the government containing the following search terms: "mallard," "towhee," "subversion" "svn" or "checksum;" government discovery letters (*e.g.*, Dkt. 199 and 233); and the government's May 24, 2017, Supplemental Expert Disclosures (Dkt. 243).

3. Craig Christenson, Turbine Technology Partners, LLC

Craig Christenson is an expert in wind turbines and Low Voltage Ride Through ("LVRT") technology. He is the president and chief executive officer of Turbine Technology Partners, LLC. Mr. Christenson's qualifications are further set forth in the resume attached as Exhibit 3.

The defense anticipates calling Mr. Christenson to testify on the "key points" previously identified by the government (*see* Dkt. 191) as being the subject of testimony from proposed expert Dr. Vahan Gevorgian. Mr. Christenson will provide scientific, technical, and/or opinion testimony regarding the manner in which wind turbines operate, including the key design elements of effective wind turbines and their various component parts. He is expected to testify about the specific causes of low voltage events and their potential impacts on the wind turbine (including damage to hardware), adjacent wind turbines (including the shutdown of some or all of the affected wind farms), and the power grid to which the turbine may be connected. He is expected to explain the importance of effective solutions to avoid the negative impacts of low voltage events, including compliance with governing regulatory and related requirements and the provision of a

stable and reliable power source. He is also expected to testify about the evolution of low voltage ride through technologies and their relative efficacies.

Mr. Christenson will testify that LVRT technology became well-known within the global wind turbine industry during the relevant time period. Beginning in the early 2000s, grid operators in Europe, and later in the United States and around the world, required that wind turbines have the capacity to effectively responding to low voltage events. As a result, wind turbine manufacturers developed a number of grid interface capabilities, including LVRT, to facilitate wind turbines safely respond to voltage fluctuations. Mr. Christenson will testify about how LVRT capability became a standard requirement imposed by grid operators worldwide.

[REDACTED]

Dated: November 21, 2017

Respectfully submitted,

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